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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Nobukazu Kurauchi

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EXAMINER

DANG, HUNG Q

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/585,689	Applicant(s) KURAUCHI, NOBUKAZU	
	Examiner Hung Q. Dang	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/10/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20-22, and 27-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art of this application and Dark et al. (US Patent 6,205,097).

Regarding claim 20, admitted prior art discloses a conventional reproduction apparatus which reads and reproduces audio information and another kind of information from a record medium where the audio information and another kind of information are recorded (Fig. 3; [0003]), characterized in that: the reproduction apparatus includes, a reading means for reading the audio information from the record medium ([0007]; [0008]), and reading, from the record medium, another kind of information recorded in a different position from the position of the audio information ([0016]), audio storing means for storing the audio information read out by the reading means ("Audio Storage Section 904" and "Audio Storage Section 905" in Fig. 3; [0007]; [0008]); an audio reproducing means for reproducing the audio information stored in the audio storing means ([0007]; [0008]), an another-kind-of-information storing means for storing another kind of information read by the reading means ("Image Storage Section 910" and "Image Storage Section 913" in Fig. 3; [0009]; [0010]), and an another-kind-of-

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information reproducing means for reproducing another kind of information stored in the another-kind-of-information storing means ([0009]; [0010]); the audio information includes first audio information, and second audio information which is continuously reproduced after the first audio information ([0007]; [0008]); and the reproducing means outputs the first audio information and the second audio information for the period of time when another kind of information is reproduced by the another-kind-of- information reproducing means ([0007]; [0008]; [0009]; [0010]).

However, the admitted prior art does not disclose a capacity-lowering means for lowering the capacity of the audio information read by the reading means, an audio storing means for storing the audio information whose capacity is lowered by the capacity-lowering means; and before the reproducing means outputs the first audio information and the second audio information, the capacity-lowering means lowers the capacity of the first audio information read by the reading means, so that the reading of the second audio information is completed before the reproduction of the first audio information is completed.

Dark et al. disclose a capacity-lowering means for lowering the capacity of the audio information read by the reading means, an audio storing means for storing the audio information whose capacity is lowered by the capacity-lowering means (column 1, lines 44-63; column 2, lines 58-64; column 3, line 56 – column 4, line 13); and before the reproducing means outputs the first audio information and the second audio information, the capacity-lowering means lowers the capacity of the first audio information read by the reading means, so that the reading of the second audio

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information is completed before the reproduction of the first audio information is completed (column 1, lines 44-63; column 2, lines 58-64; column 3, line 56 – column 4, line 13).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Dark et al. into the conventional reproduction apparatus admitted as prior art in order to allow for continuous audio play even if multiple skips occur (Dark et al., column 1, lines 54-63).

Regarding claim 21, admitted prior art also disclose the reproduction apparatus characterized in that another kind of information is at least either of image information and video information ([0009]; [0010]).

Regarding claim 22, Dark et al. also disclose the capacity-lowering means lowers the sampling frequency of the audio information read by the reading means (column 1, lines 44-63; column 2, lines 58-64; column 3, line 56 – column 4, line 13).

Regarding claim 27, Dark et al. also disclose the capacity-lowering means lowers the capacity of a part of the audio information read by the reading means, the capacity-lowering means changes the capacity-lowering ratio gradually on the boundary between the audio information of the part whose capacity is lowered and the audio information of the part whose capacity is not lowered (column 4, lines 9-11).

Regarding claim 28, Dark et al. also disclose the capacity-lowering means changes the capacity-lowering ratio of the audio information read by the reading means, based on the storage capacity of the audio storing means (column 3, line 56 – column 4, line 13).

Regarding claim 29, the admitted prior art also disclose the record medium where the audio information and another kind of information are recorded is a disk-shaped rotary record medium ([0003]).

Regarding claim 30, the admitted prior art also disclose in the disk-shaped rotary record medium, information is recorded using one of a magnetic phenomenon, an optical phenomenon, an electrical phenomenon and a combination of some of these phenomena ([0003]).

Regarding claim 31, the admitted prior art also disclose the reading means includes a head which executes a scan on the disk-shaped rotary record medium and reads information recorded thereon using one of a magnetic phenomenon, an optical phenomenon, an electrical phenomenon and a combination of some of these phenomena ([0013]; [0014]; [0016]).

Regarding claim 32, Dark et al. also disclose the capacity-lowering means changes the capacity-lowering ratio of the audio information read by the reading means, based on the movement speed of the head (column 3, line 56 – column 4, line 13).

Regarding claim 33, Dark et al. also disclose the capacity-lowering means changes the capacity-lowering ratio of the audio information read by the reading means, based on the movement speed of the head and the storage capacity of the audio storing means (column 3, line 56 – column 4, line 13).

Regarding claim 34, the admitted prior art and Dark et al. also disclose the capacity-lowering means changes the capacity-lowering ratio of the audio information read by the reading means, based on the position on the record medium in which the

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audio information is recorded and the position on the record medium in which another kind of information is recorded (Dark et al., column 3, line 56 – column 4, line 13.

Admitted prior art, [0013]-[0026]).

Regarding claim 35, the admitted prior art discloses a reproduction processing circuit which reproduces audio information and another kind of information read from a record medium where the audio information and another kind of information are recorded (Fig. 3; [0003]), characterized in that: the reproduction processing circuit includes, an information deciding section for deciding which the information read from the record medium is, the audio information or another kind of information ([0005]), a section for, if the decision is made that the information read from the record medium is the audio information, then storing the audio information in an audio storing section ([0007]; [0008]); the audio information includes first audio information, and second audio information which is continuously reproduced after the first audio information ([0007]; [0008]).

However, the admitted prior art does not disclose a capacity-lowering section for, if the decision is made that the information read from the record medium is the audio information, then lowering the capacity of the audio information and storing the audio information whose capacity is lowered in an audio storing section, and an expanding section for expanding the audio information stored in the audio storing section; and the capacity-lowering section lowers the capacity of the first audio information expanded by the expanding section, so that the reading of the second audio information is completed before the reproduction of the first audio information is completed.

Dark et al. disclose a capacity-lowering section for lowering the capacity of the audio information read by the reading means, an audio storing means for storing the audio information whose capacity is lowered by the capacity-lowering means (column 1, lines 44-63; column 2, lines 58-64; column 3, line 56 – column 4, line 13), and an expanding section for expanding the audio information stored in the audio storing section (column 3, lines 4-11, 14-17) ; and the capacity-lowering section lowers the capacity of the first audio information expanded by the expanding section, so that the reading of the second audio information is completed before the reproduction of the first audio information is completed (column 1, lines 44-63; column 2, lines 58-64; column 3, line 56 – column 4, line 13).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Dark et al. into the conventional reproduction apparatus admitted as prior art in order to allow for continuous audio play even if multiple skips occur (Dark et al., column 1, lines 54-63).

Claim 36 is rejected for the same reason as discussed in claim 20 above.

Claim 37 is rejected for the same reason as discussed in claim 20 above.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art and Dark et al. (US Patent 6,205,097) as applied to claims 20-22, and 27-37 above, and further in view of Ohga et al. (US Patent 5,345,433).

Regarding claim 23, see the discussion of claim 20 above. However, the admitted prior art and Dark et al. do not disclose the capacity-lowering means reduces the quantization bit number of the audio information read by the reading means.

Ohga et al. disclose the capacity-lowering means reduces the quantization bit number of the audio information (column 2, line 62 – column 3, line 5).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Ohga et al. into the conventional reproduction apparatus disclosed by admitted prior art and Dark et al. to further enhance the amount of data to be stored.

Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art and Dark et al. (US Patent 6,205,097) as applied to claims 20-22, and 27-37 above, and further in view of Tsuji (US Patent 6,324,188).

Regarding claim 24, see the teachings of admitted prior art and Dark et al. as discussed in claim 20 above. However, the admitted prior art and Dark et al. do not disclose the capacity-lowering means detects at least one of the silent interval, interlude interval, prelude interval and voiceless interval of the audio information read by the reading means, and lowers the capacity of only the part which corresponds to at least the one of the silent interval, interlude interval, prelude interval and voiceless interval.

Tsuji discloses a capacity-lowering means detects at least one of the silent interval, interlude interval, prelude interval and voiceless interval of the audio information, and lowers the capacity of only the part which corresponds to at least the one of the silent interval, interlude interval, prelude interval and voiceless interval (column 3, lines 7-14).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Tsuji into the reproduction apparatus

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disclosed by admitted prior art and Dark et al. to reduce the amount of audio data to be processed without significantly degrading the quality of the signal.

Regarding claim 25, Tsuji also discloses the capacity-lowering means changes the capacity-lowering ratio in accordance with the sound volume of the audio information (column 3, lines 7-14).

Regarding claim 26, Tsuji also discloses the capacity-lowering means changes the capacity-lowering ratio in accordance with at least either of the quantity of a change in the sound pitch and the quantity of a change in the sound loudness of the audio information (column 3, lines 7-14).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is (571)270-1116. The examiner can normally be reached on IFT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THAI Q. TRAN can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621